REMARKS

This Application has been carefully reviewed in light of the Final Office Action dated February 21, 2008 (the "*Final Office Action*"). At the time of the Office Action, Claims 1-28 were pending and Claims 8-21 were withdrawn. The Examiner rejects claims 1-7 and 22-28. Applicant respectfully submits that no new matter is introduced by these amendments. Applicant requests reconsideration and favorable action in this case.

Section 103 Rejections

The Examiner rejects Claims 1-7 and 22-28 under 35 U.S.C. § 103(a) as being unpatentable over C.M.R. Leung, "An object-oriented approach to directory systems," 1990, pages 736-740 ("*Leung*") in view of J. Rumbaugh et al., "Object-Oriented Modeling and Design," 1991, pages 366-396 ("*Rumbaugh*"). Applicant respectfully requests reconsideration of these rejections for the reasons stated below.

A. The Claims are Allowable over the *Leung-Rumbaugh* Combination

Independent Claim 22 of the present application recites a first table and a second table. The second table is related to the first table in that the second table includes "one row for each of the plurality of data components of the given data entry of the first table." Claim 22 further recites "determining a component of a given data entry of a **first table**" and "identifying a component identifier indicating a data type that is associated with the component of the **first table**." The component identifier is the used "to execute one of an exact or initial matching on a column of a **second table in order to locate the component in the second table**." Finally, Claim 22 then recites "returning the given data entry from the **first table** matching the component located." Thus, Applicants' claim recites a method of searching a database that requires the cooperation of two tables to identify a component identifier in the first table, search the second table for the identifier, and then return the given data entry from the first table that matches the component located in the second table. This combination of features and operations is not disclosed, taught, or suggested in the proposed *Leung-Rumbaugh* combination of elements recited in Applicant's Claim 22.

In the *Final Office Action*, the Examiner identifies *Leung* as disclosing Applicant's recited steps of "searching the rows of the second table to identify a particular one of the plurality of data components" and then "returning the given data entry from the first table that includes the particular one of the plurality of data components." However, *Leung* merely discloses that the directory services supports "[d]irectory interrogation . . . composed of five abstract services: Read, Compare, List, Search, and Abandon." (*Leung*, page 737, column 2, paragraph 1). According to the system architecture described in *Leung*, a "front-end processor, is responsible for communicating with [Directory User Agents (DUAs)]." (*Leung*, page 737, column 2, paragraph 5). Thus, requests can be sent from a DUA to a [Directory System Agent (DSA)]" after an OSI session has been "established between the pair." (*Leung*, page 737, column 2, paragraph 5). The DSP, through a sub-system processor, performs the processing of the request and returns the results back to the requesting DUA. (*Leung*, page 737, column 2, paragraph 5). Thus, the cited portion of *Leung* merely discloses that a user can perform directory requests and that such requests may include a search function forwarded from a DUA to a DSP. The mere disclosure of providing a search service is not analogous to Applicant's recited operations. With respect to the search function performed in *Leung*, *Leung* does not disclose, teach, or suggest "identifying a component identifier indicating a data type that is associated with the component of the **first table**," "using the component identifier [identified in the first table] . . . to execute one of an exact or initial matching on a column of a **second table in order to locate the component in the second table**," and then "returning the given data entry from the **first table** matching the component located," as recited in Applicant's Claim 22.

As noted by Applicant in the previous Response to Office Action submitted by Applicant on August 14, 2007, *Leung* merely discloses an object-oriented database consisting of two objects "the DIT and ENTRY, stored as two relational tables," which are illustrated in Figure 6. (*Leung*, page 739, column 1, paragraph 1; *id.* at Figure 6). *Leung*'s DIT table "holds the information of the structure of the DIT." (*Leung*, page 739, column

1, paragraph 1; *id.* at Figure 6). In the DIT table, each entry occupies one row and contains "the system identifier of an object, that of its parent, and its RDN." (*Leung*, page 739, column 1, paragraph 1; *id.* at Figure 6). The ENTRY table, on the other hand, includes detailed information about each directory object. (*Leung*, page 739, column 1, paragraph 1; *id.* at Figure 6). In the ENTRY table, each row contains "the system identifier of [a directory] object, and an attribute value of an attribute type of the object in both normalized and raw forms." (*Leung*, page 739, column 1, paragraph 1; *id.* at Figure 6).

In the *Office Action*, the Examiner points to the DIT table as teaching the claimed "first table" and to the ENTRY table as teaching the claimed "second table." (*Office Action*, pages 9-10). Applicant respectfully submits, however, that *Leung* does not disclose, teach, or suggest performing operations on the DIT and ENTRY tables in a manner analogous to the steps of Applicant's claims. With respect to the DIT and ENTRY tables, *Leung* discloses a number of operations that may be performed on each. For example, operations that may be performed on the DIT include DitNavigate, DitAdd, DitRemove, DitChildren, DitParent, DitSubtree, and DitModifyRdn. (*Leung*, page 739, column 1, paragraph 2). Operations that may be performed on the ENTRY include Read, Add, Remove, Modify, ModifyRDN, Compare, GETRdn, and Search. (*Leung*, page 739, column 1, paragraph 2). Based on the descriptions of each of these operations, the operations performed on the DIT table are isolated to the DIT table, and operations performed on the ENTRY table are isolated to the ENTRY table.

There are no indications from *Leung* that the operations relating to the DIT and ENTRY tables are interrelated. For example, with respect to a "Search" operation performed on the ENTRY table, *Leung* discloses that the "Search" operation results in the return of "details of ENTRYs which satisfied the specified filter (search conditions) within the specified search domain (a list of system identifiers of objects to be searched)." (*Leung*, page 739, column 1, paragraph 2). As such, the "Search" operation to be performed on the ENTRY table as disclosed in *Leung* may not be used to identify an entry

in the DIT table. For at least these additional reasons, *Leung* cannot be said to disclose, teach, or suggest "using the component identifier indicating the data type to execute one of an exact or initial matching **on a column of a second table in order to locate the component in the second table**" and "returning the given data entry **from the first table** matching the component located," as recited in Applicant's Claim 22.

As another example of the deficiencies of the proposed *Leung-Rumbaugh* combination, it continues to be Applicant's position that the cited references do not disclose, teach, or suggest "the **second table** comprising one row for each of the plurality of data components of the given data entry of the **first table**," as recited in Applicant's Claim 22. In the *Final Office Action*, the Examiner relies on *Leung* for disclosure of the first and second tables and on *Rumbaugh* for disclosure of "creating a second table storing data components and having one row for each component of the data." (*Final Office Action*, pages 6-8). However, the disclosures of *Leung* and *Rumbaugh*, even in combination, do not disclose, teach, or suggest cooperation between first and second tables that results in "the **second table** comprising one row for each of the plurality of data components of the given data entry of the **first table**," as recited in Applicant's Claim 22.

As noted by Applicant above, *Leung* merely discloses an object-oriented database consisting of two objects "the DIT and ENTRY, stored as two relational tables," which are illustrated in Figure 6. (*Leung*, page 739, column 1, paragraph 1; *id.* at Figure 6). *Leung*'s DIT table "holds the information of the structure of the DIT." (*Leung*, page 739, column 1, paragraph 1; *id.* at Figure 6). In the DIT table, each entry occupies one row and contains "the system identifier of an object, that of its parent, and its RDN." (*Leung*, page 739, column 1, paragraph 1; *id.* at Figure 6). The ENTRY table, on the other hand, includes detailed information about each directory object. (*Leung*, page 739, column 1, paragraph 1; *id.* at Figure 6). In the ENTRY table, each row contains "the system identifier of [a directory] object, and an attribute value of an attribute type of the object in both normalized and raw forms." (*Leung*, page 739, column 1, paragraph 1; *id.* at Figure 6). There is no disclosure in *Leung* of the ENTRY table "comprising one row for each of

the plurality of data components of the given data entry" of the DIT, as is required by Applicant's Claim 22. At most, *Leung* discloses that the first table includes one row for the data of the first table and that the second table includes one row for the data of the second table. *Leung* does not disclose, teach, or suggest "to "the second table comprising one row for each of the plurality of data components of the given data entry of the first table," as recited in Claim 22.

Rumbaugh does not cure the deficiencies of *Leung*. *Rumbaugh* merely discloses "how to translate object models into DBMS code." (*Rumbaugh*, page 368, paragraph 2; page 374, paragraph 5). According to the process disclosed in *Rumbaugh*, "you should formulate object models for the external and conceptual schema. Then, you should translate each object model to ideal tables, that is, the table model." (*Rumbaugh*, page 373, paragraph 2). In the *Office Action*, the Examiner points to figure 17.12 as disclosing Applicant's claimed step. However, Figure 17.12 merely describes that an object model is translated into a table model, which is then translated into SQL code. (*Rumbaugh*, page 381, Figure 17.12; page 380, paragraphs 1-6). Similarly, Figure 17.13 illustrates an object model (for a qualified association), and Figure 17.14 illustrates the translation of the object model of Figure 17.13 into a table model. However, an object model is not analogous to Applicant's "first table" since an object model is not a table at all. Accordingly, since the table model of *Rumbaugh* is formed from an object model and an object model is not analogous to a table, the table model of *Rumbaugh* cannot be said to be analogous to "the second table comprising one row for each of the plurality of data components of the given data entry of the first table," as recited in Claim 22.

For at least these reasons, Applicant requests reconsideration and allowance of Claim 22, together with Claims 23-28 that depend on Claim 22.

The Examiner also relies on the proposed *Leung-Rumbaugh* combination to reject independent Claims 1, 13, 14, and 18. Applicant respectfully submits, however, that the proposed *Leung-Rumbaugh* combination does not disclose, teach, or suggest each and

every element of Applicant's independent Claims 1 and 14. As one example, Claim 1 recites a first table and a second table and requires a relationship between the two tables such that "the second table compris[es] one row for each of the plurality of data components of the data entry of the first table." Claim 1 also recites "searching the rows of the second table to identify a particular one of the plurality of data components" and "returning the given data entry from the first table that includes the particular one of the plurality of data components." Claim 14 recites certain analogous features and operations. As another example, Claim 13 recites first, second, and third tables and requires that the third table is "configured to have one row for each component of each of the one or more values of the second table." Claim 13 also recites a data manager operable to "search the rows of the third table to identify a particular one of the data components" and "return the given object from the second table that includes the particular one of the plurality of data components." Claim 18 recites certain analogous features and operations. Thus, for reasons similar to those discussed above with regard to Claim 22, Applicant respectfully submits that the proposed *Leung-Rumbaugh* co mbination does not dis close, teach, or suggest each and every element set forth in Applicant's independent Claims 1, 13, 14, and 18.

For at least these reasons, Applicant respectfully requests reconsideration and allowance of Claims 1, 13, 14, and 18, together with Claims 2-7, 15-17, and 19-21 which depend from Claims 1, 14, and 18, respectively.

B. <u>The Proposed Combinations are Improper.</u>

Applicant continues to submit that the proposed *Leung-Rumbaugh* combination is improper and refers the Examiner to the arguments presented in the previous Response to Office Action submitted on August 14, 2007. To avoid burdening the record, however, Applicant does not reproduce those arguments here. However, Applicant reserves the right to present the arguments on Appeal should it become necessary.

CONCLUSION

Applicant has made an earnest attempt to place this case in condition for allowance. For the foregoing reasons, and for other reasons clearly apparent, Applicant respectfully request full allowance of all pending Claims.

If the Examiner feels that a telephone conference or an interview would advance prosecution of this Application in any manner, the undersigned attorney for Applicant stands ready to conduct such a conference at the convenience of the Examiner.

No fees are believed to be due, however, the Commissioner is hereby authorized to charge any fees or to credit any overpayments to Deposit Account No. 02-0384 of Baker Botts L.L.P.

Respectfully submitted,

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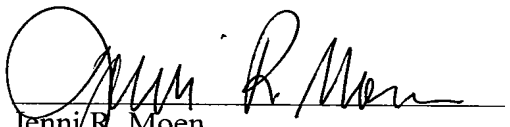

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